

Psychiatrists' access to electronic laboratory results

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Aims and method A completed audit cycle, consisting of email surveys of all psychiatrists and a review of acute trust information technology registers was undertaken in Derbyshire Healthcare NHS Foundation Trust, to assess whether psychiatrists could access electronic laboratory results from the neighbouring acute trust laboratory. This was replicated in Nottinghamshire Healthcare NHS Trust, with an initial audit; plans were then implemented to increase access.

Results In Derbyshire, 14% of psychiatrists could access electronic results initially, with limited ward access. By re-audit, all wards had access, and 28% used those systems. The later initial audit in Nottinghamshire Healthcare Trust revealed 6% access.

Clinical implications Benefits of electronic results include clinical (faster decisions, safer monitoring, prompt detection of acute problems); efficiency savings (less wasted time telephoning); and other (improved relationships with general practitioners and laboratories, reduced marginalisation of patients with mental illness and professionals). There may be considerable clinical and efficiency savings for trusts.

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Physical health problems are a considerable burden to patients with mental illness, reducing quality of life and life expectancy.^{1,2} Furthermore, a review of physical healthcare by the Royal College of Psychiatrists in 2009¹ noted that 'there is a growing body of evidence that many psychiatrists lack the skills required to provide for the general healthcare of people with mental health problems' (p. 9). This paper describes modifying one systemic area to improve overall physical care: increasing access for psychiatrists to the electronic laboratory results for their patients, on a par with colleagues in general practice and other hospital specialties. Junior doctors who transfer from working in acute trusts to mental health trusts frequently comment on reductions in basic physical services, such as reduced access to phlebotomy, routine electrocardiograms as well as access to electronic laboratory results. This audit developed from an awareness of such deficits and in particular was prompted by the harm (including prolonged delirium with worsening physical health) caused to one patient, 'Geoff', (Box 1) due to a lack of access for the admitting junior doctors to the neighbouring acute trust's electronic laboratory service. As well as highlighting these clinical issues via audit, we have sought to address them by increasing/establishing access for psychiatrists to these

systems. We also consider the factors that lead to under-recognition of these types of problems.

Method

We contacted the neighbouring acute trusts (Derbyshire Healthcare NHS Foundation Trust for the first audit cycle, then Nottingham University Hospitals NHS Trust) to identify logistical obstacles preventing psychiatrists accessing electronic results from their trusts. We then sent

Box 1 Delays in treating Geoff

'Geoff', a 59-year-old patient with bipolar disorder, experienced delays in the treatment of an infection, generated by a number of factors, including lack of access to a computerised results system. Although delirium was recognised as a possible cause of his presentation, delays arose due to systemic factors such as lack of access to an electronic results system (which showed results indicating a probable urinary tract infection), compounded by common systemic issues such as handover problems. The patient later became grossly delirious and agitated, requiring rapid tranquillisation and prolonged seclusion, followed by emergency medical treatment with antibiotics in the neighbouring acute trust, and he had initial acute renal failure. He has since made a good recovery.

an email survey to all psychiatrists and trainees, asking whether they had access. We then triangulated this information with human resources and acute trust information technology (IT) services. We completed this process twice for a complete audit cycle in Derby, then began it again with a first audit in Nottingham. The initial Derby audit was for the period August 2009 to January 2010, the Derby re-audit was in June 2011, and the Nottinghamshire initial audit occurred in October 2011. We facilitated access to these electronic results systems, with the appointment of a project manager in Derby and liaised with Nottinghamshire Healthcare NHS Trust (where senior staff were already trying to overcome this problem) and its neighbouring acute trust to catalyse change.

Results

Initial audit in Derbyshire South 2010

Of 79 doctors surveyed, 3 (4%) self-reported as having access. As the response rate was 28/79 (35%), this 3/28 respondents equated to 11% of those responding. This seemed fairly accurate, as a comparison to the acute trust's register of users showed 11 doctors of all surveyed had access. Many of these were junior doctors with pre-existing access from holding medical posts at Derbyshire Healthcare NHS Foundation Trust. Their ability to use their access was reduced because only one ward computer could link to the acute trust's system. As a result of the audit it was agreed to appoint a project manager to coordinate the implementation of the electronic results system and increase access.

Re-audit in Derbyshire 2011

Post implementation of the electronic results system, access rose to 23 doctors of 81 surveyed (28%), with a response rate of 40/81 (49%), i.e. 23/40 (58%) of respondents reported access. Users least likely to have adopted the system were at consultant level (7% use), whereas junior doctors were more likely to use it. Data indicated that those who had adopted the system were keen users of it. The initial audit was extended to include Derbyshire North, which had a separate system. Similar usage rates, 11/40 surveyed (28%) were reported, with a response rate of 12/40 (30%), i.e. 11/12 (92%) of respondents having access. Recommendations were made to increase usage including education of consultants on the advantages of the system, and to pre-arrange accounts for junior doctors prior to induction.

Initial audit in Nottinghamshire 2011

A total of 6% (16 of 250) of all doctors surveyed reported access, with a response rate of 47/250 (19%), i.e. 16/47 (34%) of respondents having access. This was triangulated with the main acute trust, Nottingham University Hospitals, and confirmed as likely to be accurate, as the trust had not granted access to a number of outside bodies for 2 years, due to IT problems. The audit helped facilitate access to the acute trust's electronic system, which senior staff had already been working on to implement. Results by subgroup of doctor are shown in Table 1.

Discussion

Method

One weakness in this type of survey may be low response rates, varying from 19% up to 49%. As we were able to confirm data via other reliable sources such as the acute trusts and human resources, we are confident that our results reflected existing levels of access to the electronic results system.

One may also wonder how generalisable results may be within subgroups of doctors, based on those response rates. Our Nottingham data (Table 1) suggests that most subgroups of doctors were responding fairly evenly, apart from reduced rates for specialty and associate specialist doctors, with variation noted that junior doctors responded more than seniors, perhaps indicating recent use/familiarity with the systems, as the table shows. We also performed an analysis of responses for the re-audit in Derbyshire South; of the overall 49% response rate (40/81), the consultant response rate was 35% (16/46); staff grade 54% (7/13); core trainees, general practitioner (GP) vocational training scheme, foundation year 1 and 2 (F2 and F1) doctors: 52%; and specialist registrars 100% (albeit 1 respondent), suggesting results fairly reflected access across different grades. These figures understate the response rate, as a number of respondents did not indicate their grade (5/81).

Underreporting of systemic issues

We conducted a brief survey of attitudes and experience towards the Incident Record 1 (IR1) system used in the NHS nationally during the initial audit in Derby, as the IR1 system had identified only two problems with blood monitoring of patients with mental illness in the previous 4 years. Many colleagues reported that they did not use the

Table 1 Nottinghamshire audit responses (2011) regarding electronic laboratory results access

	Total surveyed, <i>n</i>	Response, <i>n</i> (%)	Had access		
			<i>n</i>	% of respondents	% of total surveyed
Consultants	134	27 (20)	9	33	7
Senior house officers and foundation year 1 doctors	38	12 (32)	6	50	16
Specialist registrars	44	6 (14)	1	17	2
Specialty and associate specialist doctors	34	2 (6)	0	0	0
Total	250	47 (19)	16	34	6

IRI system as they did not receive feedback nor feel that it would effect change. One senior psychiatrist commented that he could not recall a general adult clinic that did not have some problem accessing lithium results, but that it would have become too onerous to fill out IRIs because of the extent of the problem.

Implications for clinical practice

The benefits of psychiatrists having access to a electronic results system are given in Box 2 and we consider a few of these in more detail below.

Patient safety

There is substantial evidence that there have been problems with monitoring of lithium blood results for patients with mental illness. The National Patient Safety Agency (NPSA) released new guidelines in December 2009 for safer lithium therapy, as suboptimal monitoring of lithium³ was a key theme in incidents reported to the agency. It now requires that 'blood test results are available at the point when clinical decisions are made' and as part of their recommendations, patients on lithium now receive a paper booklet on which lithium levels are recorded (similar to warfarin booklets). In the initial benchmarking audit of lithium monitoring in mental health trusts in the UK by POMH (Prescribing Observatory for Mental Health) that informed the NPSA, one of the factors noted was that few clinicians had electronic access to test results.⁴

The metabolic syndrome is becoming a prominent challenge to patients and their psychiatrists^{1,5} and studies such as Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) highlighted low rates of treatment for problems such as diabetes, despite high elevated baseline rates.⁵ Patients increasingly have high expectations of care in this area, and may sue when it falls short: AstraZeneca (maker of quetiapine) settled £125 million in a class action in 2010 to 17 500 patients, for withholding information that quetiapine might cause diabetes.⁶ In this context, the finding that psychiatrists are inadequately monitoring metabolic side-effects⁷ is alarming, particularly where blood tests were required. Furthermore, psychiatrists should also be wary of overreliance on GPs' systems, with one US study finding that 83% of respondents in primary care reported reviewing a test result they wished they had known about earlier in the previous 2 months.⁸ The 'Swiss cheese' model of error generation demonstrates how random errors in a system of care can occur sequentially leading to serious failure of care.⁹ Reconciling (ensuring tests ordered are carried out and results provided), reviewing and acting on results are all stages where omissions may occur.

Enhanced credibility for the psychiatrist clinically

The credibility of psychiatry as a medical specialty is founded on a process by which the diagnostic skills of the psychiatrist–doctor are utilised to develop a treatment plan. The collation and interpretation of clinical data is an integral part of this. The data may comprise basic blood tests, drug monitoring or sophisticated scanning results. Delegating the handling of routine test results to general practice can feel like 'buck-passing' and is potentially

Box 2 Benefits for psychiatrists

- Rapid access to results, leading to quicker and safer treatments.
- Safer monitoring of medication levels such as lithium and clozapine and medication side-effects, for example metabolic, with a trend view of results over time.
- Enhanced diagnostic accuracy for physical health problems acutely.
- More secure than paper copies and safer than receiving verbal reports.
- Efficiency and monetary savings – less wasted staff time telephoning for results.
- Improved relations with general practitioners (GPs) – psychiatrists are able to access results without having to request copies from the GP.
- Can be used to educate patients and students such as use of computed tomography, magnetic resonance imaging scans in clinic.
- Destigmatising – gives psychiatrists the same tools as other secondary care doctors.

hazardous practice if there is uncertainty as to whether the ordering psychiatrist or the GP acts on them.

Sims is adamant that even experienced psychiatrists should employ a 'back to basics approach' to continuing professional development¹⁰ and unimpeded access to the results of clinical investigations is essential to harness and foster the range of skills of a rounded doctor. However, this may not be easy because the current policy within the UK of mental health services being provided separately from acute medical care has led to estrangement from medical colleagues and support services.¹¹ The nexus created by a shared electronic results system is an important means of addressing the marginalisation of patients with mental illness.

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